

# CITY PENSION FUND FOR FIREFIGHTERS AND POLICE OFFICERS IN THE CITY OF MIAMI BEACH

## CHAPTER 112.664, F.S. COMPLIANCE REPORT

In Connection with the October 1, 2019 Funding Actuarial Valuation Report and the Fund's Financial Reporting for the Year Ended September 30, 2019







August 10, 2020

Ms. Donna Brito  
Executive Director  
City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach  
1691 Michigan Avenue, Suite 355  
Miami Beach, Florida 33139

**Re: October 1, 2019 Chapter 112.664 Compliance Report**

Dear Donna:

Gabriel, Roeder, Smith & Company (GRS) has been engaged by the Board of Trustees (Board) of the City Pension Fund for Firefighters and Police Officers in the City of Miami Beach (Fund) to prepare a disclosure report to satisfy the requirements set forth in Chapter 112.664, F.S. and as further required pursuant to Chapter 60T-1.0035, F.A.C.

This report was prepared at the request of the Board and is intended for use by the Board and those designated or approved by the Board. This report may be provided to parties other than the Board only in its entirety and only with the permission of the Board.

The purpose of the report is to provide the required information specified in Chapter 112.664, F.S. and to supplement this information with additional exhibits. This report should not be relied on for any purpose other than the purpose described above.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: Fund experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the Fund's funded status); and changes in Fund provisions or applicable law. The scope of this engagement does not include an analysis of the potential range of such measurements.

This report was based upon information furnished by the City and the Board concerning Fund benefits, Fund provisions and Fund members as used in the corresponding Actuarial Valuation Reports for the Valuation Dates indicated. Financial information was provided by the City and Board as of September 30, 2019. We reviewed the information provided for internal and year-to-year consistency, but did not audit the data. The Board is responsible for the accuracy of the data.

Except where specific assumptions are required by Chapter 112.664, F.S, this report was prepared using actuarial assumptions adopted by the Board as described in Section C. The Board's demographic assumptions are based on the results of an actuarial experience study for the period October 1, 2009 through September 30, 2014. The Board's investment return assumption is based upon input from the Investment Consultant and based upon a Capital Market Assumption Study completed in 2014. The mortality assumptions are prescribed by statute. The Board's assumptions represent an estimate of future Fund experience.

The investment return assumption of 2% higher than the investment return assumption utilized in the Actuarial Valuation Report does not represent an estimate of future Fund experience nor observation of the estimates inherent in market data. This assumption is provided as a counterpart to the Chapter 112.664, F.S. requirement to utilize an investment return assumption of 2% lower than the investment return assumption utilized in the Actuarial Valuation Report. The inclusion of the additional 2% higher assumption shows a more complete assessment of the range of potential results as opposed to the *one-sided* range required by statute.

If all actuarial assumptions are met and if all current and future minimum required contributions are paid Fund assets will be sufficient to pay all Fund benefits, future contributions are expected to remain relatively stable as a percent of payroll and the funded status is expect to improve. Fund minimum required contributions are determined in compliance with the requirements of the Florida Protection of Public Employee Retirement Benefits Act and for Fire and Police Retirement Chapters 175 and 185 with normal cost determined as a level percent of covered payroll and a level percent of pay amortization payment using a maximum amortization period of 30 years.

The Fund's GASB funded ratio as of October 1, 2019 is 72.91% defined as the ratio of the market value of Fund assets to the total pension liability (GASB roll-forward).

The Fund's GASB funded ratio and the GASB Net Pension Liability may not be appropriate for assessing the sufficiency of Fund assets to meet the estimated cost of settling benefit obligations but may be appropriate for assessing the need for or the amount of future contributions.

The undersigned are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

The signing actuaries are independent of the Fund sponsor.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge the information contained in this report is accurate and presents the actuarial position of the Fund as of the valuation date as required by statute. All calculations have been made in conformity with generally accepted actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial



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Standards Board and with applicable statutes.

With respect to the reporting standards for defined benefit retirement plans or systems contained in Section 112.664(1), F.S., the actuarial disclosures required under this section were prepared and completed by us or under our direct supervision and we acknowledge responsibility for the results. To the best of our knowledge, the results are complete and accurate, and in our opinion, meet the requirements of Section 112.664(1), F.S., and Section 60T-1.0035, F.A.C.

Respectfully submitted,

GABRIEL, ROEDER, SMITH AND COMPANY

By *Jennifer Borregard*

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Date: August 10, 2020



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## **SECTION A**

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### **CHAPTER 112.664, F.S. RESULTS**

**Net Pension Liability**  
**Using Financial Reporting Assumptions per GASB Statements No. 67 and No. 68**  
**and Using Assumptions Required Under 112.664(1)(a), F.S.**

Measurement Date	September 30, 2019
<b>A. <u>Total Pension Liability (TPL)</u></b>	
Service Cost	\$ 20,212,389
Interest	94,542,878
Benefit Changes	0
Difference Between Actual and Expected Experience	7,883,134
Assumption Changes	7,294,349
Benefit Payments	(68,275,323)
Contribution Refunds	(191,002)
Other	0
<b>Net Change in Total Pension Liability</b>	<b>\$ 61,466,425</b>
<b>Total Pension Liability (TPL) - (beginning of year)</b>	<b>1,229,168,051</b>
<b>Total Pension Liability (TPL) - (end of year)</b>	<b>\$ 1,290,634,476</b>
<b>B. <u>Fund Fiduciary Net Position</u></b>	
Contributions - City	\$ 39,626,600
Contributions - State	120,549
Contributions - Member	6,972,214
Net Investment Income	39,053,408
Benefit Payments	(68,275,323)
Contribution Refunds	(191,002)
Administrative Expenses	(855,761)
Other	0
<b>Net Change in Fund Fiduciary Net Position</b>	<b>\$ 16,450,685</b>
<b>Fund Fiduciary Net Position - (beginning of year)</b>	<b>924,502,976</b>
<b>Fund Fiduciary Net Position - (end of year)</b>	<b>\$ 940,953,661</b>
<b>C. <u>Net Pension Liability (NPL) - (end of year): (A) - (B)</u></b>	<b>\$ 349,680,815</b>
Valuation Date	October 1, 2018

**Certain Key Assumptions**

Investment Return Assumption 7.75%

**Mortality Table:**

For healthy participants during employment, RP 2000 Combined Healthy Participant Mortality Tables, separate rates for males and females, with 90% Blue Collar Adjustment / 10% White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy participants post employment, RP 2000 Annuitant Mortality Tables, separate rates for males and females, with 90% Blue Collar Adjustment / 10% White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For disabled male participants, 60% RP 2000 Disabled Male Mortality Table setback four years / 40% RP 2000 Annuitant Male Mortality Table with White Collar Adjustment with no setback, without projected mortality improvements. For disabled female participants, 60% RP 2000 Disabled Female Mortality Table set forward two years / 40% RP 2000 Annuitant Female Mortality Table with White Collar Adjustment with no setback, without projected mortality improvements.





**Net Pension Liability**  
Using Assumptions Required Under 112.664(1)(b), F.S.

Measurement Date	September 30, 2019
<b>A. <u>Total Pension Liability (TPL)</u></b>	
Service Cost	\$ 32,806,683
Interest	92,191,876
Benefit Changes	0
Difference Between Actual and Expected Experience	11,626,756
Assumption Changes	11,303,323
Benefit Payments	(68,275,323)
Contribution Refunds	(191,002)
Other	0
<b>Net Change in Total Pension Liability</b>	<b>\$ 79,462,313</b>
<b>Total Pension Liability (TPL) - (beginning of year)</b>	<b>1,587,807,709</b>
<b>Total Pension Liability (TPL) - (end of year)</b>	<b>\$ 1,667,270,022</b>
<b>B. <u>Fund Fiduciary Net Position</u></b>	
Contributions - City	\$ 39,626,600
Contributions - State	120,549
Contributions - Member	6,972,214
Net Investment Income	39,053,408
Benefit Payments	(68,275,323)
Contribution Refunds	(191,002)
Administrative Expenses	(855,761)
Other	0
<b>Net Change in Fund Fiduciary Net Position</b>	<b>\$ 16,450,685</b>
<b>Fund Fiduciary Net Position - (beginning of year)</b>	<b>924,502,976</b>
<b>Fund Fiduciary Net Position - (end of year)</b>	<b>\$ 940,953,661</b>
<b>C. <u>Net Pension Liability (NPL) - (end of year): (A) - (B)</u></b>	<b>\$ 726,316,361</b>
Valuation Date	October 1, 2018

**Certain Key Assumptions**

Investment Return Assumption 5.75%

**Mortality Table:**

For healthy participants during employment, RP 2000 Combined Healthy Participant Mortality Tables, separate rates for males and females, with 90% Blue Collar Adjustment / 10% White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy participants post employment, RP 2000 Annuitant Mortality Tables, separate rates for males and females, with 90% Blue Collar Adjustment / 10% White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For disabled male participants, 60% RP 2000 Disabled Male Mortality Table setback four years / 40% RP 2000 Annuitant Male Mortality Table with White Collar Adjustment with no setback, without projected mortality improvements. For disabled female participants, 60% RP 2000 Disabled Female Mortality Table set forward two years / 40% RP 2000 Annuitant Female Mortality Table with White Collar Adjustment with no setback, without projected mortality improvements.



**Net Pension Liability**  
**Using Assumptions Required Under 112.664(1)(a), F.S. Plus 2% on Investment Return Assumption**

Measurement Date	September 30, 2019
<b>A. <u>Total Pension Liability (TPL)</u></b>	
Service Cost	\$ 13,087,382
Interest	94,362,603
Benefit Changes	0
Difference Between Actual and Expected Experience	5,622,704
Assumption Changes	4,962,529
Benefit Payments	(68,275,323)
Contribution Refunds	(191,002)
Other	0
<b>Net Change in Total Pension Liability</b>	<b>\$ 49,568,893</b>
<b>Total Pension Liability (TPL) - (beginning of year)</b>	<b>991,418,610</b>
<b>Total Pension Liability (TPL) - (end of year)</b>	<b>\$ 1,040,987,503</b>
<b>B. <u>Fund Fiduciary Net Position</u></b>	
Contributions - City	\$ 39,626,600
Contributions - State	120,549
Contributions - Member	6,972,214
Net Investment Income	39,053,408
Benefit Payments	(68,275,323)
Contribution Refunds	(191,002)
Administrative Expenses	(855,761)
Other	0
<b>Net Change in Fund Fiduciary Net Position</b>	<b>\$ 16,450,685</b>
<b>Fund Fiduciary Net Position - (beginning of year)</b>	<b>924,502,976</b>
<b>Fund Fiduciary Net Position - (end of year)</b>	<b>\$ 940,953,661</b>
<b>C. <u>Net Pension Liability (NPL) - (end of year): (A) - (B)</u></b>	<b>\$ 100,033,842</b>
Valuation Date	October 1, 2018

**Certain Key Assumptions**

Investment Return Assumption 9.75%

**Mortality Table:**

For healthy participants during employment, RP 2000 Combined Healthy Participant Mortality Tables, separate rates for males and females, with 90% Blue Collar Adjustment / 10% White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy participants post employment, RP 2000 Annuitant Mortality Tables, separate rates for males and females, with 90% Blue Collar Adjustment / 10% White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For disabled male participants, 60% RP 2000 Disabled Male Mortality Table setback four years / 40% RP 2000 Annuitant Male Mortality Table with White Collar Adjustment with no setback, without projected mortality improvements. For disabled female participants, 60% RP 2000 Disabled Female Mortality Table set forward two years / 40% RP 2000 Annuitant Female Mortality Table with White Collar Adjustment with no setback, without projected mortality improvements.



**Asset and Benefit Payment Projection**  
**Not Reflecting Any Future Contributions**  
**Using Financial Reporting Assumptions per GASB Statements No. 67 and No. 68**  
**and Using Assumptions Required Under 112.664(1)(a), F.S.**

FYE	Market Value of Assets (BOY)	Expected Investment Return	Projected Benefit Payments	Market Value of Assets (EOY)
2020	\$ 915,454,127	\$ 66,999,998	\$ 74,009,708	\$ 908,444,417
2021	908,444,417	66,384,303	75,948,956	898,879,764
2022	898,879,764	65,551,194	78,424,213	886,006,745
2023	886,006,745	64,470,609	80,762,419	869,714,935
2024	869,714,935	63,124,360	83,201,367	849,637,928
2025	849,637,928	61,494,086	85,505,015	825,626,999
2026	825,626,999	59,558,145	87,923,948	797,261,196
2027	797,261,196	57,295,313	90,190,140	764,366,369
2028	764,366,369	54,691,180	92,330,153	726,727,396
2029	726,727,396	51,720,451	94,559,737	683,888,110
2030	683,888,110	48,348,948	96,861,303	635,375,755
2031	635,375,755	44,556,981	98,832,744	581,099,992
2032	581,099,992	40,333,049	100,586,104	520,846,937
2033	520,846,937	35,654,751	102,268,733	454,232,955
2034	454,232,955	30,502,066	103,653,032	381,081,989
2035	381,081,989	24,855,922	104,875,719	301,062,192
2036	301,062,192	18,695,673	105,821,145	213,936,720
2037	213,936,720	12,004,478	106,458,092	119,483,106
2038	119,483,106	4,752,055	107,110,295	17,124,866
2039	17,124,866	50,311	107,518,526	0
2040	0	0	107,702,437	0
2041	0	0	107,601,936	0
2042	0	0	107,285,552	0
2043	0	0	106,720,617	0
2044	0	0	105,953,715	0
2045	0	0	104,963,089	0
2046	0	0	103,781,360	0
2047	0	0	102,353,955	0
2048	0	0	100,774,781	0
2049	0	0	98,999,440	0

Number of years for which current market value of assets are adequate to sustain the payment of expected retirement benefits reflecting no contributions from the City, Members or State: 19.08

**Certain Key Assumptions**

Investment return assumption 7.65%

**Mortality Table:**

For healthy participants during employment, PUB-2010 Headcount Weighted Safety Employee Female Mortality Table and Safety Below Median Employee Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For healthy participants post employment, PUB-2010 Headcount Weighted Safety Healthy Retiree Female Mortality Table and Safety Below Median Healthy Retiree Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For disabled participants, 80% PUB-2010 Headcount Weighted General Disabled Retiree Mortality Table / 20% PUB-2010 Headcount Weighted Safety Disabled Retiree Mortality Table, separate rates for males and females, without projected mortality improvements.

**Note: As required in Section 112.664(c) of the Florida Statutes, the projection of Fund assets does not include future contributions from the City, Members or State. For this reason, this projection should not be viewed as representative of the amount of time the Fund can sustain benefit payments. Under the Government Accounting Standards Board standards which include City, Member and State contributions, the Fund is expected to be able to pay all future benefit payments.**



**Asset and Benefit Payment Projection**  
**Not Reflecting Any Future Contributions**  
**Using Assumptions Required Under 112.664(1)(b), F.S.**

FYE	Market Value of Assets (BOY)	Expected Investment Return	Projected Benefit Payments	Market Value of Assets (EOY)
2020	\$ 915,454,127	\$ 49,477,171	\$ 74,009,708	\$ 890,921,590
2021	890,921,590	48,032,232	75,948,956	863,004,866
2022	863,004,866	46,379,820	78,424,213	830,960,473
2023	830,960,473	44,498,353	80,762,419	794,696,407
2024	794,696,407	42,375,419	83,201,367	753,870,459
2025	753,870,459	39,998,843	85,505,015	708,364,287
2026	708,364,287	37,354,337	87,923,948	657,794,676
2027	657,794,676	34,428,381	90,190,140	602,032,917
2028	602,032,917	31,212,898	92,330,153	540,915,662
2029	540,915,662	27,692,112	94,559,737	474,048,037
2030	474,048,037	23,844,245	96,861,303	401,030,979
2031	401,030,979	19,658,953	98,832,744	321,857,188
2032	321,857,188	15,132,425	100,586,104	236,403,509
2033	236,403,509	10,253,229	102,268,733	144,388,005
2034	144,388,005	5,012,343	103,653,032	45,747,316
2035	45,747,316	454,227	104,875,719	0
2036	0	0	105,821,145	0
2037	0	0	106,458,092	0
2038	0	0	107,110,295	0
2039	0	0	107,518,526	0
2040	0	0	107,702,437	0
2041	0	0	107,601,936	0
2042	0	0	107,285,552	0
2043	0	0	106,720,617	0
2044	0	0	105,953,715	0
2045	0	0	104,963,089	0
2046	0	0	103,781,360	0
2047	0	0	102,353,955	0
2048	0	0	100,774,781	0
2049	0	0	98,999,440	0

Number of years for which current market value of assets are adequate to sustain the payment of expected retirement benefits reflecting no contributions from the City, Members or State:

15.42

**Certain Key Assumptions**

Investment return assumption

5.65%

Mortality Table:

For healthy participants during employment, PUB-2010 Headcount Weighted Safety Employee Female Mortality Table and Safety Below Median Employee Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For healthy participants post employment, PUB-2010 Headcount Weighted Safety Healthy Retiree Female Mortality Table and Safety Below Median Healthy Retiree Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For disabled participants, 80% PUB-2010 Headcount Weighted General Disabled Retiree Mortality Table / 20% PUB-2010 Headcount Weighted Safety Disabled Retiree Mortality Table, separate rates for males and females, without projected mortality improvements.

**Note: As required in Section 112.664(c) of the Florida Statutes, the projection of Fund assets does not include future contributions from the City, Members or State. For this reason, this projection should not be viewed as representative of the amount of time the Fund can sustain benefit payments. Under the Government Accounting Standards Board standards which include City, Member and State contributions, the Fund is expected to be able to pay all future benefit payments.**



**Asset and Benefit Payment Projection**  
**Not Reflecting Any Future Contributions**  
**Using Assumptions Required Under 112.664(1)(a), F.S. Plus 2% on Investment Return Assumption**

FYE	Market Value of Assets (BOY)	Expected Investment Return	Projected Benefit Payments	Market Value of Assets (EOY)
2020	\$ 915,454,127	\$ 84,527,214	\$ 74,009,708	\$ 925,971,633
2021	925,971,633	85,442,214	75,948,956	935,464,891
2022	935,464,891	86,230,750	78,424,213	943,271,428
2023	943,271,428	86,863,581	80,762,419	949,372,590
2024	949,372,590	87,326,651	83,201,367	953,497,874
2025	953,497,874	87,606,022	85,505,015	955,598,881
2026	955,598,881	87,684,109	87,923,948	955,359,042
2027	955,359,042	87,544,175	90,190,140	952,713,077
2028	952,713,077	87,178,554	92,330,153	947,561,478
2029	947,561,478	86,566,522	94,559,737	939,568,263
2030	939,568,263	85,676,565	96,861,303	928,383,525
2031	928,383,525	84,495,639	98,832,744	914,046,420
2032	914,046,420	83,021,749	100,586,104	896,482,065
2033	896,482,065	81,240,074	102,268,733	875,453,406
2034	875,453,406	79,139,468	103,653,032	850,939,842
2035	850,939,842	76,710,898	104,875,719	822,775,021
2036	822,775,021	73,944,270	105,821,145	790,898,146
2037	790,898,146	70,835,326	106,458,092	755,275,380
2038	755,275,380	67,364,117	107,110,295	715,529,202
2039	715,529,202	63,507,573	107,518,526	671,518,249
2040	671,518,249	59,251,038	107,702,437	623,066,850
2041	623,066,850	54,580,657	107,601,936	570,045,571
2042	570,045,571	49,480,409	107,285,552	512,240,428
2043	512,240,428	43,931,327	106,720,617	449,451,138
2044	449,451,138	37,911,683	105,953,715	381,409,106
2045	381,409,106	31,396,679	104,963,089	307,842,696
2046	307,842,696	24,358,421	103,781,360	228,419,757
2047	228,419,757	16,767,669	102,353,955	142,833,471
2048	142,833,471	8,589,976	100,774,781	50,648,666
2049	50,648,666	1,035,103	98,999,440	0

Number of years for which current market value of assets are adequate to sustain the payment of expected retirement benefits reflecting no contributions from the City, Members or State: 29.50

**Certain Key Assumptions**

Investment return assumption 9.65%

**Mortality Table:**

For healthy participants during employment, PUB-2010 Headcount Weighted Safety Employee Female Mortality Table and Safety Below Median Employee Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For healthy participants post employment, PUB-2010 Headcount Weighted Safety Healthy Retiree Female Mortality Table and Safety Below Median Healthy Retiree Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For disabled participants, 80% PUB-2010 Headcount Weighted General Disabled Retiree Mortality Table / 20% PUB-2010 Headcount Weighted Safety Disabled Retiree Mortality Table, separate rates for males and females, without projected mortality improvements.

**Note: As required in Section 112.664(c) of the Florida Statutes, the projection of Fund assets does not include future contributions from the City, Members or State. For this reason, this projection should not be viewed as representative of the amount of time the Fund can sustain benefit payments. Under the Government Accounting Standards Board standards which include City, Member and State contributions, the Fund is expected to be able to pay all future benefit payments.**



<b>ACTUARIALLY DETERMINED CONTRIBUTION</b>			
	Valuation Assumptions and 112.664(1)(a), F.S. Assumptions	112.664(1)(b), F.S. Assumptions	112.664(1)(a), F.S. Assumptions Plus 2% on Investment Return Assumption
A. Valuation Date	October 1, 2019	October 1, 2019	October 1, 2019
B. Actuarial Determined Contribution to Be Paid During Fiscal Year Ending	September 30, 2021	September 30, 2021	September 30, 2021
C. Annual Payroll of Active Employees	\$ 70,560,379	\$ 70,560,379	\$ 70,560,379
D. Total Minimum Funding Requirement			
1. Total Normal Cost	\$ 22,965,817	\$ 36,667,894	\$ 15,152,917
2. Annual Payment to Amortize Unfunded Actuarial Liability	25,969,404	40,113,352	11,772,908
3. Interest Adjustment	261,008	196,420	323,241
4. Expected Service Buyback	211,586	211,586	211,586
5. Total Minimum Funding Requirement	\$ 49,407,815	\$ 77,189,252	\$ 27,460,652
E. Expected Payroll of Active Employees for Following Plan Year (\$ / % of annual pay)	\$ 72,536,070 102.80%	\$ 72,536,070 102.80%	\$ 72,536,070 102.80%
F. Expected Contribution Sources (\$ / % of expected pay)			
1. City	\$ 43,324,910 59.73%	\$ 71,884,227 99.10%	\$ 20,763,226 28.62%
2. Member	7,345,775 10.13%	7,345,775 10.13%	7,345,775 10.13%
3. State (Share Plan)	120,549 0.17%	120,549 0.17%	120,549 0.17%
4. Total	\$ 50,791,234 70.02%	\$ 79,350,551 109.39%	\$ 28,229,550 38.92%



Unfunded Actuarial Accrued Liabilities Bases and Amortization Payments

Amortization Base	Current Unfunded Liabilities	Valuation and			Amortization Payment			Remaining Funding Period
		112.6641(a), F.S.			112.6641(b), F.S.			
		Assumptions	Assumptions	Assumptions	Assumptions	Assumptions	Plus 2%	
10/01/2001	\$ 10,823,177	\$ 1,147,634	\$ 1,043,663	\$ 1,254,713			12 years	
10/01/2002	12,538,431	1,253,095	1,130,543	1,379,800			13 years	
10/01/2003	1,099,672	104,183	93,260	115,518			14 years	
10/01/2003	33,108,726	3,136,731	2,807,859	3,478,008			14 years	
10/01/2004	36,036,197	3,252,476	2,889,052	3,630,941			15 years	
10/01/2005	(32,366,041)	(2,794,887)	(2,463,754)	(3,140,888)			16 years	
10/01/2005	6,510,115	562,164	495,560	631,759			16 years	
10/01/2005	24,175,381	2,087,604	1,840,268	2,346,044			16 years	
10/01/2006	(4,918,806)	(407,905)	(356,888)	(461,384)			17 years	
10/01/2006	21,292,521	1,765,738	1,544,895	1,997,237			17 years	
10/01/2007	25,053,944	2,001,846	1,738,564	2,278,671			18 years	
10/01/2008	6,016,735	464,557	400,529	532,073			19 years	
10/01/2008	33,209,023	2,564,095	2,210,697	2,936,745			19 years	
10/01/2009	23,791,873	1,779,757	1,523,486	2,050,728			20 years	
10/01/2009	68,473,910	5,122,207	4,384,649	5,902,072			20 years	
10/01/2010	4,634,972	336,703	286,190	390,251			21 years	
10/01/2010	17,515,387	1,272,387	1,081,500	1,474,744			21 years	
10/01/2011	(3,162,123)	(223,541)	(188,687)	(260,580)			22 years	
10/01/2011	17,462,890	1,234,512	1,042,027	1,439,060			22 years	
10/01/2011	31,063,227	2,195,968	1,853,572	2,559,819			22 years	
10/01/2012	8,006,260	551,841	462,616	646,874			23 years	
10/01/2012	26,956,069	1,857,980	1,557,569	2,177,944			23 years	
10/01/2012	(30,602,435)	(1,420,048)	(1,190,445)	(1,664,595)			23 years	
10/01/2013	1,603,765	107,964	89,899	127,246			24 years	
10/01/2013	(6,532,315)	(4,478,896)	(3,729,465)	(5,278,816)			24 years	
10/01/2014	(6,162,826)	(405,840)	(335,695)	(480,859)			25 years	
10/01/2014	5,957,185	392,298	324,494	464,814			25 years	
10/01/2015	9,001,161	580,674	477,182	691,566			26 years	
10/01/2015	2,548,728	164,421	135,117	195,821			26 years	
10/01/2015	(8,672,743)	(559,488)	(459,771)	(666,333)			26 years	
10/01/2016	(11,676,536)	(738,889)	(603,304)	(884,417)			27 years	
10/01/2016	36,212,478	2,291,518	1,871,028	2,742,846			27 years	
10/01/2017	8,197,078	509,424	413,321	612,740			28 years	
10/01/2017	7,120,390	442,511	359,031	532,257			28 years	
10/01/2018	6,666,799	407,359	328,459	492,305			29 years	
10/01/2018	7,393,890	451,786	364,281	545,997			29 years	
10/01/2019	(1,300,265)	(78,195)	(62,664)	(94,937)			30 years	
10/01/2019	(16,002,342)	(962,340)	(771,209)	(1,168,394)			30 years	
10/03/2019	Assumption Change - 112.6641(b), F.S. Assumptions	N/A	17,525,923	N/A			30 years	
10/03/2019	Assumption Change - 112.6641(a), F.S. Assumptions Plus 2%	N/A	N/A	(17,754,482)			30 years	





**SECTION B**



**SUMMARY OF FUND PROVISIONS**



**Outline of Principal Provisions of the Retirement Fund  
(as of October 1, 2019)**

**A. Relevant Provisions:**

The Fund was created under Chapter 23414, Laws of Florida, Special Act of 1945, as amended by Ordinance No. 2016-4035 adopted September 27, 2016 and reflecting the most recent Collectively Bargained Agreements executed June 7, 2019 and September 4, 2019 for Firefighters and Police Officers, respectively.

**B. Eligibility Requirements:**

Any full-time employee of the City who is certified as a Firefighter or Police Officer as a condition of employment.

**C. Membership Tiers:**

Tier 1 - Members hired prior to July 14, 2010

Tier 2 - Members hired on or after July 14, 2010 but prior to September 30, 2013

Tier 3 - Members hired on or after September 30, 2013 but prior to June 8, 2016 for the Fire Department and July 20, 2016 for the Police Department

Tier 4 - Members hired on or after June 8, 2016 but prior to May 8, 2019 for the Fire Department and hired on or after July 20, 2016 but prior to July 31, 2019 for the Police Department

Tier 5 - Members hired on or after May 8, 2019 for the Fire Department and July 31, 2019 for the Police Department

**D. Credited Service:**

All periods of employment as an Employee for which contributions have been made to the Fund together with all service in the uniformed services of the United States required to be included.

**E. Pre-Employment Service:**

Members with at least 5 years of credited service (10 years for Tier 5 members) may purchase pre-employment military service. Pre-employment military service must be purchased within 24 months following the date the member completes 5 years of credited service (10 years for Tier 5 members) under the pension fund. A member may purchase up to two years of pre-employment military service at the accrual rate of 3% per year.

Members are also able to purchase an increase in benefit multiplier or pre-employment public safety service during the window period of July 1, 2021 to September 30, 2021. A member may purchase up to two years of additional pension service at the accrual rate of 3% per year.

However, the total of all combinations of pre-employment benefits purchased cannot exceed two years or a 6% additional benefit.

The price for each year purchased shall be of 10.0% (10.5% for members hired on or after September 30, 2013) of the member's Salary during the 12 calendar months immediately preceding the date of such purchase.

**Outline of Principal Provisions of the Retirement Fund  
(as of October 1, 2019)**

**F. Pensionable Pay:**

Salary is defined as base pay, longevity pay, overtime and any pays which are negotiated as pensionable. Effective July 14, 2010, off-duty pay is pensionable for any member who is eligible for overtime and receives off-duty compensation through the City. Effective September 30, 2013, pensionable overtime is limited to 300 hours per calendar year.

**1. Overtime and Off-Duty pay included in pension computation for Police Officers:**

- Pensionable overtime pay not exceeding 300 hours per calendar year and off duty is limited in each year to an amount that is equal to 11% of highest annualized pay rate for the same salary rank that the member is in at time of retirement.
- The 11% limitation shall not apply to any member who holds the rank of sergeant or lieutenant on September 30, 2013, or any Police Officer promoted to the rank of sergeant prior to the date the 2013 Certified Police Sergeant Promotional Register expired in 2015. For these members, the inclusion of overtime and / or off duty in the member's salary shall be limited in each year to an amount which is equal to 70% of the difference between the member's annualized pay rate at retirement and the highest annualized pay rate for the next higher salary rank.
- For any members who self-demote they will become subject to the eleven percent (11%) limitation on overtime and off-duty compensation.

**2. Overtime and Off-Duty pay included in pension computation for Firefighters:**

- Pensionable overtime pay not exceeding 300 hours per calendar year and off duty is limited in each year to an amount that is equal to 11% of highest annualized pay rate for the same salary rank that the member is in at time of retirement.

**G. Final Average Monthly Earnings (FAME):**

Tier 1 and eligible to retire prior to September 30, 2015 - the greater of the average of the 2 highest paid years or the 2 last paid years prior to date of retirement after taking into consideration the overtime limit.

Tier 1 and eligible to retire on or after September 30, 2015 - the greater of the average of the 3 highest paid years or the 3 last paid years prior to date of retirement after taking into consideration the overtime limit.

Tier 2 - the greater of the average of the 3 highest paid years or the 3 last paid years prior to date of retirement after taking into consideration the overtime limit.

Tier 3 - the greater of the average of the 5 highest paid years or the 5 last paid years prior to date of retirement after taking into consideration the overtime limit.



**Outline of Principal Provisions of the Retirement Fund  
(as of October 1, 2019)**

Tier 4 and Tier 5 - the average of the 5 highest paid years prior to date of retirement taking into consideration the overtime limit.

**H. Normal Retirement:**

**1. Eligibility:**

Tier 1 and eligible to retire prior to September 30, 2013 - the earlier of attainment of age 50 or Rule of 70

Tier 1 and eligible to retire on or after September 30, 2013 - the earlier of attainment of age 50 or Rule of 70 (must attain age 47) or reach the 85% maximum pension benefit regardless of age

Tier 2 and Tier 3 - the earlier of attainment of age 50 with 5 years of creditable service or Rule of 70 (must attain age 48) or reach the 85% maximum pension benefit regardless of age

Tier 4 and Tier 5 - the earlier of attainment of age 52 with 5 years of creditable service or Rule of 70 (must attain age 48) or reach the 85% maximum pension benefit regardless of age

**2. Benefit:**

Tier 1 and eligible to retire prior to September 30, 2013:

3% x FAME x Credited Service up to 15 years plus 4% x Credited Service after 15 years  
Benefit shall not exceed 90% of FAME.

Tier 1 and eligible to retire on or after September 30, 2013 but prior to September 30, 2015:

3% x FAME x Credited Service up to 20 years plus 4% x Credited Service after 20 years  
Benefit shall not exceed 85% of FAME (exception if exceeded 85% as of September 30, 2013).

Tier 1 and eligible to retire on or after September 30, 2015, Tier 2, Tier 3, Tier 4 and Tier 5:

3% x FAME x Credited Service up to 20 years plus 4% x Credited Service after 20 years  
Benefit shall not exceed 85% of FAME.

A member's benefit multiplier for credited service earned before October 1, 2013 shall not be reduced.

**I. Deferred Retirement:**

**1. Eligibility:**

Any first day of the month past Normal Retirement Date.

**2. Benefit:**

Benefit calculated as for Normal Retirement based upon service and pay to Deferred Retirement Date.



**Outline of Principal Provisions of the Retirement Fund  
(as of October 1, 2019)**

**J. Disability Retirement:**

**1. Eligibility:**

Totally and permanently disabled meaning incapacity to perform regular duty as Firefighter or Police Officer (and completion of at least 5 years of Credited Service for non-service incurred disability).

Effective July 1, 2019, a Firefighter who becomes totally and permanently unable to perform useful and efficient service as a Firefighter due to a diagnosis of cancer or circumstances that arise out of the treatment of such cancer will be presumed to be disabled in-line of duty subject to the limitations in Chapter 112.1816, Florida Statutes.

**2. Benefit:**

Accrued benefit (minimum of 85% of current salary at time of disability for service incurred disability).

**K. Death Benefit:**

**1. Service Incurred:**

Greater of accrued benefit or 85% of members salary payable as a monthly benefit to the spouse until death or remarriage, to a Domestic Partner until death, marriage or entry into another Domestic Partnership, to unmarried children in equal shares until age 18 (until age 22 if a full-time student or until recovery from handicap if handicapped), or to dependent parents in equal shares.

**2. Non-Service Incurred:**

For members with at least 5 years of service, accrued benefit is payable for the first 12 months after death and 75% of the accrued benefit is payable thereafter (with a minimum benefit of 25% of average monthly salary); Benefits are payable to the spouse until death or remarriage, to a Domestic Partner until death, marriage or entry into another Domestic Partnership, to unmarried children in equal shares until age 18 (until age 22 if a full-time student or until recovery from handicap or until marriage if handicapped), or to dependent parents in equal shares. However, if the member has been married for less than 10 years, benefits are payable to the spouse only for the life expectancy of the deceased member at time of death.

**L. Vested Benefit:**

**1. Eligibility:**

Any age prior to 50 with at least 5 years of service for members who terminate employment on or after September 30, 2013.

**2. Benefit:**

Return of employee contributions or accrued benefit upon attainment of age 50. If a member terminates employment with less than 10 years of service and passes away prior to the normal retirement date, the return of employee contributions is the only benefit.



**Outline of Principal Provisions of the Retirement Fund  
(as of October 1, 2019)**

**M. Employee Contributions:**

10.0% of pensionable wages (on a pre-tax basis) for members hired prior to September 30, 2013 and 10.5% of pensionable wages (on a pre-tax basis) for members hired on or after September 30, 2013; If contributions are refunded to the member or to his or her beneficiaries, then interest is credited at the rate of 3% per annum.

**N. Payment of Retirement Benefit:**

Benefit is payable to the member for his or her life. Upon death of member, except those retiring prior to November 5, 2003, the standard benefit is a 75% joint and survivor annuity with a specified beneficiary as provided under the plan. The specified beneficiary will receive a survivor annuity equal to 100% of the total benefit for one year following the death of the member and thereafter 75% of the total benefit until death or remarriage. However, upon death, if the member has been married or in a domestic partnership for less than 10 years, the survivor annuity is payable only for the life expectancy of the deceased member at time of death.

In lieu of the standard benefit, the members may elect the actuarial equivalent of the 10 year certain and life annuity, with a designated beneficiary, any of the following optional forms of payment:

- 75% joint and contingent survivor annuity with a designated beneficiary
- 66 ⅔% joint and contingent survivor annuity with a designated beneficiary
- 50% joint and contingent survivor annuity with a designated beneficiary
- 25% joint and contingent survivor annuity with a designated beneficiary
- 10 year certain and life annuity with a designated beneficiary
- Life of member only

Members who retired prior to November 5, 2003 were subject to different normal and optional forms of payment.

**O. Deferred Retirement Option Program (DROP):**

Police Officers and Firefighters are eligible to participate in a Deferred Retirement Option Program (DROP) upon meeting eligibility for a normal service retirement.

**Operations of the DROP:**

1. Member contributions to the Pension Plan will cease upon entering the DROP.
2. The member's monthly retirement benefit, based on final average earnings and service, will be calculated as of the date prior to them entering the DROP.
3. The member will cease to accrue additional pension benefits (with the exception of the COLA under the pension plan).
4. The member will no longer be eligible for Disability or Pre-Retirement Service Connected Death benefits from the Pension Plan.
5. The member's monthly pension will be deposited into the selected investment vehicles.
6. Members who enter the DROP on or after June 8, 2016 for Fire Department members and July 20, 2016 for Police Department members may participate in DROP for a period not to exceed ninety-six (96) months.



**Outline of Principal Provisions of the Retirement Fund  
(as of October 1, 2019)**

Notwithstanding the above, participation may not continue beyond the date when the member's combined years of creditable service and time in the DROP equals 456 months for members who enter the DROP on or after September 1, 2012.

Members who enter the DROP on or before September 30, 2015 may extend their DROP participation period by 12 months for a total maximum DROP participation period not to exceed seventy-two (72) months.

Members who enter the DROP on or after October 1, 2015 but prior to June 8, 2016 for Fire Department members and July 20, 2016 for Police Department members may extend their DROP participation period by up to 36 months for a total maximum DROP participation period not to exceed ninety-six (96) months.

7. The member will not have access or be able to borrow against any of the funds accumulated in their DROP account.
8. The member may sever employment with the City at any time during the DROP period. Such separation will terminate their participation in the DROP.
9. No payment will be made from the DROP account until the member severs employment with the City.
10. Following severance of employment, the funds in the DROP will be paid under the *DROP Account Payment Options* the member selected. The member will also start receiving their monthly pension which was previously being deposited in the DROP.
11. A 2.5% COLA (1.5% per year for participants hired on or after July 14, 2010) is paid annually on the anniversary date of the member's retirement.

Members hired before June 8, 2016 for Fire Department members and July 20, 2016 for Police Department members who elect to extend or enter the DROP and participate for more than 5 years will have no COLA adjustment applied for years six (6), seven (7), and eight (8) while participating in the DROP. Members hired on or after June 8, 2016 for Fire Department members and July 20, 2016 for Police Department members will receive a zero percent (0%) COLA for the first (1st), second (2nd), third (3rd) and fourth (4th) annual adjustment dates while participating in the DROP.

**P. Cost-of-Living Adjustment:**

Effective October 1, 2010, after 1 year of retirement, benefits are increased by 2.5% per year (1.5% per year for participants hired on or after July 14, 2010), compounded annually, on the anniversary date of each member's retirement.

For members retired prior to October 1, 2010, benefit increases occur on the first of October each year.

Members whose grandfathered Base Plan benefit is greater than the benefit otherwise provided by this plan will receive the applicable cost-of-living adjustment on that basis (2% a year beginning the October three years after retirement) until such time as the benefit from this plan with 2.5% cost-of-living exceeds that comparable grandfathered Base Plan benefit.



**Outline of Principal Provisions of the Retirement Fund  
(as of October 1, 2019)**

**Q. Changes Since Previous Actuarial Valuation**

**1. Membership Tiers:**

A new Tier membership was created (Tier 5) for Members hired on or after May 8, 2019 for the Fire Department and July 31, 2019 for the Police Department.

**2. Benefit Purchases:**

Pre-employment military service was updated to be allowable after 10 years of credited service for Tier 5 members. For all members, the purchase must be completed within 24 months following the date the member completes 5 years of Credited Service (10 years for Tier 5 members).

The ability to purchase an increase in benefit multiplier or pre-employment public safety service credit was created during the last quarter of the current collectively bargained agreement, from July 1, 2021 to September 30, 2021.

A limit on all benefits purchased is not to exceed two years or a 6% multiplier was created.

**3. Normal Retirement Eligibility:**

Eligibility was extended to include the age at which the maximum benefit percentage (85%) is reached.

**4. Disability Retirement:**

Florida Statutes updated the disability retirement eligibility for Firefighters to reflect diagnoses of cancer or circumstances that arise out of the treatment of such cancer to be presumed to be disabled in-line of duty subject to the limitations in Chapter 112.1816, Florida Statutes

**5. Vested Benefit Eligibility:**

Vested Benefit Eligibility was updated to reflect a 10 year eligibility for Tier 5 members.

**6. Transfers**

Transfers from other City Pension Systems is no longer applicable to Tier 5 members.

## **SECTION C**

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### **ACTUARIAL ASSUMPTIONS AND COST METHODS USED FOR FUNDING**



**Actuarial Assumptions and Actuarial Cost Methods Used in the Valuation  
(as of October 1, 2019)**

**A. Mortality**

For healthy participants during employment, PUB-2010 Headcount Weighted Safety Employee Female Mortality Table and Safety Below Median Employee Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018.

For healthy participants post employment, PUB-2010 Headcount Weighted Safety Healthy Retiree Female Mortality Table and Safety Below Median Healthy Retiree Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018.

For disabled participants, 80% PUB-2010 Headcount Weighted General Disabled Retiree Mortality Table / 20% PUB-2010 Headcount Weighted Safety Disabled Retiree Mortality Table, separate rates for males and females, without projected mortality improvements.

Sample Ages (2019)	Pre-retirement Future Life Expectancy (Years)		Post-retirement Future Life Expectancy (Years)	
	Male	Female	Male	Female
	45	40.61	44.58	37.11
50	35.45	39.39	32.27	36.11
55	30.37	34.25	27.50	31.08
60	25.43	29.19	22.93	26.31
62	23.51	27.18	21.21	24.48

Sample Ages (2039)	Pre-retirement Future Life Expectancy (Years)		Post-retirement Future Life Expectancy (Years)	
	Male	Female	Male	Female
	45	42.31	46.11	39.13
50	37.12	40.90	34.23	37.98
55	32.00	35.73	29.39	32.90
60	27.00	30.63	24.70	28.04
62	25.04	28.60	22.92	26.16

**B. Investment Return**

7.65%, compounded annually, net of investment expenses includes inflation at 3.00%.



**Actuarial Assumptions and Actuarial Cost Methods Used in the Valuation  
(as of October 1, 2019)**

**C. Expenses**

Prior year's actual administrative expenses.

**D. Employee Withdrawal Rates**

Representative values of the assumed annual rates of withdrawal among members in active service are as follows:

<u>Age</u>	<u>Withdrawal Rate</u>	<u>Age</u>	<u>Withdrawal Rate</u>
20	2.00%	35	1.25%
25	1.75%	40	1.00%
30	1.50%	45	0.75%

**E. Disability Rates**

Representative values of the assumed annual rates of disability among members in active service are as follows:

<u>Age</u>	<u>Disability Rates</u>	<u>Age</u>	<u>Disability Rate</u>
20	0.07%	45	0.58%
25	0.11%	50	0.99%
30	0.16%	55	1.42%
35	0.22%	60	2.00%
40	0.32%	64	2.69%

For Firefighters, 30% of disabilities are assumed to be non-service incurred - 70% service incurred.  
For Police Officers, 35% of disabilities are assumed to be non-service incurred - 65% service incurred.

**Actuarial Assumptions and Actuarial Cost Methods Used in the Valuation  
(as of October 1, 2019)**

**F. Salary Increase Factors**

Representative values of the assumed annual rates of future salary increase are as follows:

<u>Age</u>	<u>Merit Salary Increase</u>	<u>Age</u>	<u>Merit Salary Increase</u>
20	3.7%	45	2.7%
25	7.7%	50	2.7%
30	6.7%	55	2.7%
35	3.7%	60	1.7%
40	2.7%	64	0.7%

In addition to the average assumed salary increase rates shown above the expected cost of living increases are as follows:

<u>FYE</u>	<u>COLA Salary Increase</u>	<u>Weighted Average Increase *</u>
2020	1.00%	4.83%
2021	1.00%	4.66%
2022 and thereafter	2.18%	6.06%

The cost of living increases shown above are based on a 1% increase each April through 2021 contained in the collective bargaining agreement and long term expected increases of 2.18% annually each July.

\* The weighted average increase shown is based on aging of the current active census demographics.

**G. Payroll Growth Assumption**

The aggregate compensation used to compute the accrued liability contribution rate is assumed to increase at a rate of 3.5% per year - not greater than historical 10-year average (2.8% as of October 1, 2019).

**Actuarial Assumptions and Actuarial Cost Methods Used in the Valuation  
(as of October 1, 2019)**

**H. Retirement**

All members are assumed to retire at age 50 with 26.25 years of service, but not later than age 65. Retirement is assumed to occur in accordance with the following rates:

Service	Rate of Retirement	
	Meeting Rule of 70	Not Meeting Rule of 70
Less than 20	20%	4%
20	25%	5%
21	30%	10%
22	35%	10%
23	40%	20%
24	50%	60%
25	70%	60%
26	100%	100%
More than 26	100%	100%

**I. DROP Assumption**

80% of all active participants will participate in the DROP.

Leave DROP	Enter DROP on or before September 30, 2015	Enter the DROP on or after October 1, 2015
Prior to 5 years	0%	0%
After 5 years	5%	5%
After 6 years	N/A	5%
After 7 years	N/A	10%
After 8 years	N/A	100%

The recent extension of the DROP may alter the retirement experience of the Fund.

DROP assumptions will need to be monitored in light of future DROP experience.

**J. Overtime and Off-Duty Pay Limitation**

No members excluded from the eleven percent (11%) limitation on overtime and off-duty compensation are assumed to self-demote.

**Actuarial Assumptions and Actuarial Cost Methods Used in the Valuation  
(as of October 1, 2019)**

**K. Loadings for Contingencies**

Pre-Employment Service: A City contribution of 0.275% of annual pensionable payroll is added to provide for the purchase (or *buyback*) of pre-employment military service and any probationary service by the membership.

Transfers into Fund from other City pension systems: A City contribution of 0.025% of annual pensionable payroll is added to provide for the transfer of service under another City pension system. This load does not apply to Tier 5 members.

**L. Marital Assumptions**

1. 77% of members are assumed married or entitled to benefits for dependents, including registered domestic partners.
2. Male spouses are assumed to be three years older than female spouses.

**M. Smoothed Asset Valuation Method**

The method used for determining the smoothed value of assets phases in the deviation between the expected and actual return on assets at the rate of 20% per year. The smoothed value of assets will be further adjusted to the extent necessary to fall within the corridor whose lower limit is 80% of the fair market value of fund assets and whose upper limit is 120% of the fair market value of fund assets.

**N. Actuarial Cost Methods**

**Normal Retirement, Termination, Disability, and Death Benefits: Entry-Age-Actuarial Cost Method**

Under this method the normal cost for each active employee is the amount which is calculated to be a level percentage of pay that would be required annually from his age at hire to his assumed retirement age to fund his estimated benefits, assuming the Fund had always been in effect. The normal cost for the Fund is the sum of such amounts for all employees. The actuarial accrued liability as of any valuation date for each active employee or inactive employee who is eligible to receive benefits under the Fund is the excess of the actuarial present value of estimated future benefits over the actuarial present value of current and future normal costs. The unfunded actuarial accrued liability as of any valuation date is the excess of the actuarial accrued liability over the smoothed value of assets of the Fund.

**Vested Normal Retirement, Termination, Disability, and Death Benefits: Unit Credit Cost Method**

Under this method, the actuarial present value of vested accrued benefits is an amount calculated to be the sum of the present values of each individual's vested accrued or earned benefit under the Fund as of the valuation date. Each individual's calculation is based on pay and service as of the valuation date.

The DROP accounts balance is included in the assets and liabilities as of the valuation date.



**Actuarial Assumptions and Actuarial Cost Methods Used in the Valuation  
(as of October 1, 2019)**

**O. Changes Since Previous Actuarial Valuation**

**1. Investment Return:**

The interest rate used to calculate all liabilities was reduced from 7.75% to 7.65%.

**2. Mortality:**

The mortality assumption was updated to use the mortality assumption used by the Florida Retirement System (FRS) as required under F.S., Chapter 2015-157 based upon the July 1, 2019 FRS Actuarial Valuation.

**3. Disability Rates:**

For Firefighters, the percentage of service incurred disability was updated from 65% to 70%.

**4. Salary Increase Factors:**

Salary COLAs were adjusted based on the most recent Collectively Bargained Agreements.

**5. Loadings for Contingencies:**

Transfers into Fund from other City pension systems: A City contribution load of 0.025% of annual pensionable payroll is no longer applicable to Tier 5 members for the transfer of service under another City pension system.

**Assumption Change History**  
**(as of October 1, 2019)**

**A. Effective October 1, 2002:**

The actuarial cost method was changed from frozen initial liability to entry age.

The amortization of the unfunded accrued liability was changed from level dollar to level percentage of pay, with aggregate payroll assumed to increase at 3.50% per year.

**B. Effective October 1, 2005:**

The *fresh start* method was applied to the actuarial value of assets to begin a new five-year phase-in of realized and unrealized gains and losses.

The retirement rates were increased to reflect retirement experience for participants meeting the age 50 and *Rule of 70* eligibility criteria.

The loadings for contingencies and pre-employment service were increased from 5.00% to 7.00% and from 4.50% to 5.50% respectively.

**C. Effective October 1, 2006:**

The actuarial valuation system used by Buck Consultants was upgraded effective October 1, 2006. The gain resulting from this upgrade was amortized over 30 years.

**D. Effective October 1, 2008:**

The interest rate used to calculate all liabilities was reduced to 8.40% from 8.50%.

The salary scale used to project future pay increases was reduced by 50 basis points at each age to reflect the current and projected economic climate.

The loadings for contingencies were increased by 100 basis points (50 basis points for salary rates and 50 basis points for buybacks).

The retirement assumption was updated to reflect an increase in the level of retirements starting at age 45.

**E. Effective October 1, 2009:**

The interest rate used to calculate all liabilities was reduced from 8.40% to 8.30%.

The mortality rates were changed from the 1983 Group Annuity Mortality Table to the RP-2000 Combined Mortality Table with a blue collar adjustment for healthy lives and the RP-2000 Disabled Mortality Table for disabled participants.

A load of 20% was added to the projected base payroll to estimate the projected pensionable payroll used to determine the expected member contributions.

**Assumption Change History  
(as of October 1, 2019)**

**E. Effective October 1, 2009 (cont'd):**

An experience study was performed on the fund over the 5 year period October 1, 2003 through October 1, 2008 and the following assumptions were changed to more accurately reflect fund experience:

- **Retirement Rates:** The retirement assumption was changed to reflect the results of the experience study.
- **Withdrawal Rates:** The withdrawal assumption was changed to reflect the results of the experience study.
- **Salary Increase Rates:** The salary increase assumption was changed to an average increase of 3.83% for fund year 2009 to reflect the freeze on COLA for the fund year and to an average increase of 6.00% for all subsequent fund years.
- **Load for Overtime and Other Pays:** The load for overtime and other pays was changed from 7.50% to 16.00% to reflect the results of the experience study.

**F. Effective October 1, 2010:**

The interest rate used to calculate all liabilities was reduced from 8.30% to 8.20%.

The freeze on the cost of living increase component of the salary scale was extended to March 31, 2012.

**G. Effective October 1, 2011:**

The interest rate used to calculate all liabilities was reduced from 8.20% to 8.10%.

The mortality tables for healthy pre and post retirement participants was projected 15 and 7 years respectively from the valuation date to reflect mortality improvements.

The contingency compensation load for overtime and other pays was increased from 16% to 18% to account for the expected increase in pensionable pay due to the inclusion of off duty pay in the computation of pensionable pay.

**H. Effective October 1, 2012:**

The interest rate used to calculate all liabilities was reduced from 8.10% to 8.00%.

The expected salary increases for FYE 2014 and 2015 were reduced by 2.17% to reflect a freeze in the cost of living increases and increased by 3.00% to reflect a 3.00% cost of living increase in FYE 2016.



**Assumption Change History  
(as of October 1, 2019)**

H. Effective October 1, 2012 (cont'd):

The contingency compensation load for overtime and other pays was decreased from 18% to 16% to account for the expected decrease in pensionable pay due to the cap on overtime hours in the computation of pensionable pay.

The contingency pre-employment service load was decreased from 6.000% to 0.275% to account for the elimination of certain buybacks.

The expected salary increases were adjusted to account for the extension of ranges for Firefighter I, Police Officer, Sergeant of Police and Police Lieutenant effective April 1, 2015.

I. Effective October 1, 2013:

The asset valuation method was updated to phase in the deviation between the expected and actual return on assets at the rate of 20% per year - further adjusted to the extent necessary to fall within the corridor whose lower limit is 80% of the fair market value of plan assets and whose upper limit is 120% of the fair market value of plan assets.

The load for projected pensionable payroll was decreased from 20% to 16% to account for the expected decrease in pensionable pay due to the cap on overtime hours in the computation of pensionable pay.

J. Effective October 1, 2014:

The interest rate used to calculate all liabilities was reduced from 8.00% to 7.95%.

Payroll growth assumption is limited to 10-year average.

K. Effective October 1, 2015:

The interest rate used to calculate all liabilities was decreased from 7.95% to 7.90%.

An experience study was performed on the fund over the 5 year period October 1, 2009 through September 30, 2014 and the following assumptions were changed to more accurately reflect fund experience:

- **Withdrawal Rates:** The withdrawal assumption was updated to reflect the results of the experience study.
- **Disability Incidence:** The disability incidence assumption was changed to 65% service incurred / 35% non-service incurred.
- **The load for compensation and projected pensionable payroll** was replaced with actual pensionable pay.
- **Retirement Rates:** The retirement assumption was updated to reflect the results of the experience study.

Updated DROP assumptions to reflect updated DROP provisions.

A City contribution of 0.025% of annual pensionable payroll is added to provide for the transfer of service under another City pension system.

The salary increase assumptions were updated to better reflect anticipated merit and COLA increases.

**Assumption Change History  
(as of October 1, 2019)**

**L. Effective October 1, 2016:**

The interest rate used to calculate all liabilities was reduced from 7.90% to 7.85%.

The mortality assumption was updated to use the mortality assumption used by the Florida Retirement System (FRS) as required under F.S., Chapter 2015-157 based upon the July 1, 2016 FRS Actuarial Valuation.

**M. Effective October 1, 2017:**

The interest rate used to calculate all liabilities was reduced from 7.85% to 7.80%.

**N. Effective October 1, 2018:**

The interest rate used to calculate all liabilities was reduced from 7.80% to 7.75%.

**O. Effective October 1, 2019:**

The interest rate used to calculate all liabilities was reduced from 7.75% to 7.65%.

The mortality assumption was updated to use the mortality assumption used by the Florida Retirement System (FRS) as required under F.S., Chapter 2015-157 based upon the July 1, 2019 FRS Actuarial Valuation.

For Firefighters, the percentage of service incurred disability was updated from 65% to 70%.

Salary COLAs were adjusted based on the most recent Collectively Bargained Agreement.

A City contribution of 0.025% of annual pensionable payroll to provide for the transfer of service under another City pension system is changed to be no longer applicable to Tier 5 members.

**SECTION D**

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**GLOSSARY**

## GLOSSARY

<b><i>Actuarial Accrued Liability</i></b>	The difference between the Actuarial Present Value of Future Benefits, and the Actuarial Present Value of Future Normal Costs.
<b><i>Actuarial Assumptions</i></b>	Assumptions about future fund experience that affect costs or liabilities, such as: mortality, withdrawal, disablement, and retirement; future increases in salary; future rates of investment earnings; future investment and administrative expenses; characteristics of members not specified in the data, such as marital status; characteristics of future members; future elections made by members and other items.
<b><i>Actuarial Cost Method</i></b>	A procedure for allocating the Actuarial Present Value of Future Benefits between the Actuarial Present Value of Future Normal Costs and the Actuarial Accrued Liability.
<b><i>Actuarial Equivalent</i></b>	Of equal Actuarial Present Value, determined as of a given date and based on a given set of Actuarial Assumptions.
<b><i>Actuarial Present Value</i></b>	The amount of funds required to provide a payment or series of payments in the future. It is determined by discounting the future payments with an assumed interest rate and with the assumed probability each payment will be made.
<b><i>Actuarial Present Value of Future Benefits</i></b>	The Actuarial Present Value of amounts which are expected to be paid at various future times to active members, retired members, beneficiaries receiving benefits and inactive, non-retired members entitled to either a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.
<b><i>Actuarial Valuation</i></b>	The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a fund. An Actuarial Valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB No. 67.
<b><i>Actuarial Value of Assets</i></b>	The value of the assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of fund assets or a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the actuarially required contribution.

<b><i>Amortization Method</i></b>	A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization Payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the rate at which total covered payroll of all active members is assumed to increase.
<b><i>Amortization Payment</i></b>	That portion of the fund contribution which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.
<b><i>Amortization Period</i></b>	The period used in calculating the Amortization Payment.
<b><i>Annual Required Contribution</i></b>	The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered fund compensation. The annual required contribution consists of the Employer Normal Cost and Amortization Payment plus interest adjustment.
<b><i>Closed Amortization Period</i></b>	A specific number of years that is reduced by one each year, and declines to zero with the passage of time. For example if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc.
<b><i>Employer Normal Cost</i></b>	The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions.
<b><i>Equivalent Single Amortization Period</i></b>	For funds that do not establish separate amortization bases (separate components of the UAAL), this is the same as the Amortization Period. For funds that do establish separate amortization bases, this is the period over which the UAAL would be amortized if all amortization bases were combined upon the current UAAL payment.
<b><i>Experience Gain/Loss</i></b>	A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two actuarial valuations. To the extent that actual experience differs from that assumed, Unfunded Actuarial Accrued Liabilities emerge which may be larger or smaller than projected. Gains are due to favorable experience, e.g., the assets earn more than projected, salaries do not increase as fast as assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. Losses are the result of unfavorable experience, i.e., actual results that produce Unfunded Actuarial Accrued Liabilities which are larger than projected.
<b><i>Funded Ratio</i></b>	The ratio of the Actuarial Value of Assets to the Actuarial Accrued Liability.



<b>GASB</b>	Governmental Accounting Standards Board.
<b><i>GASB No. 67 and GASB No. 68</i></b>	These are the governmental accounting standards that set the accounting rules for public retirement funds and the employers that sponsor or contribute to them. Statement No. 67 sets the accounting rules for the funds themselves, while Statement No. 68 sets the accounting rules for the employers that sponsor or contribute to public retirement funds.
<b><i>Normal Cost</i></b>	The annual cost assigned, under the Actuarial Cost Method, to the current fund year.
<b><i>Open Amortization Period</i></b>	An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. In other words, if the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar amount or in relation to covered payroll.
<b><i>Unfunded Actuarial Accrued Liability</i></b>	The difference between the Actuarial Accrued Liability and Actuarial Value of Assets.
<b><i>Valuation Date</i></b>	The date as of which the Actuarial Present Value of Future Benefits are determined. The benefits expected to be paid in the future are discounted to this date.